

Test Standards Board Charter

Version 1.6

1 PURPOSE

The Test Standards Board Charter (Charter) sets forth the mission, roles, and responsibilities of the FAA's Air Traffic Organization (ATO) Operations Planning Test Standards Board (TSB).

2 BACKGROUND

The National Airspace System (NAS) is a large complex integrated system of systems that enables the safe and efficient flow of air traffic and contributes to our national defense. To ensure quality and reliability, new NAS systems, as well as improvements and modifications to existing NAS systems must be tested and evaluated prior to going into operational service. This test and evaluation (T&E) function is a key role of the Operations Planning organization's William J. Hughes Technical Center. In an effort to continually improve the test products and services provided to the ATO, the verification and validation (V&V) effort was initiated in 2005 (see Appendix A for V&V and T&E definitions). The primary objectives of this effort were to identify and address how T&E can:

- a) Reduce latent defects in fielded systems.
- b) Promote data driven, best value decision making throughout the respective life cycles of these systems.
- c) Minimize the cost and time required for test.

As a result of this effort, standard practices and procedures are being implemented and the TSB was established.

3 MISSION

The mission of the TSB is to ensure high quality T&E products and services and serve as the principal ATO focal point for implementing and administering V&V practices, methods, and policies. In fulfillment of this mission, the TSB has the following objectives:

- a) Provide independent quality T&E oversight.
- b) Develop, document, and institutionalize best practice V&V operations.

- c) Ensure technical integrity and process conformance.
- d) Continuously improve V&V processes.
- e) Plan for V&V of new NAS systems including those that comprise the Next Generation Air Transportation System (NextGen), emerging technologies, and other evolving FAA needs.

4 TSB ROLES AND RESPONSIBILITIES

The TSB operates as part of the Technical Strategies and Integration (TSI) Group under the authority of the Technical Center Director. TSB operations and procedures are documented in Appendix B of this Charter (TSB Internal Operations) and the Verification and Validation Operations Guide.

The TSB will oversee developmental and operational test activities to ensure quality and process conformance. The TSB will also serve as a technical authority and will review and provide recommendations on test strategies, plans, conduct, and reporting. Appendix C lists the members of the TSB.

The TSB will work collaboratively with the leads in the TSI organization to implement standard processes related to project management, configuration management, quality assurance, and training. These processes are considered foundational process areas that are essential to accomplishing V&V goals and objectives.

Under this Charter, it is the responsibility of the TSB to:

- a) Conduct independent reviews of Test and Evaluation Master Plans, final operational test and evaluation reports, and system readiness for operational test and evaluation and provide the Technical Center Director with recommendations for or against approval.
- b) Establish, enhance, and maintain standards, including the T&E Handbook and V&V related policies.
- c) Support subject-matter quality assurance experts in the conduct of V&V process quality audits and report the results.
- d) Hold periodic T&E process improvement reviews and caucuses.
- e) Participate as members of Integrated Test Teams (ITT). See Appendix A for the ITT definition.
- f) Track program progress, T&E activities, and risks.

- g) Provide expert advice to the T&E staff on an as requested basis in areas of TSB expertise.
- h) Report V&V status to TSI managers on a quarterly basis. Resolve or escalate major V&V risks related to process or policy conformance, T&E sufficiency, or credibility.
- i) Support and advise test program practitioners regarding T&E processes, test methods, and technical matters.
- j) Support the training of test subject-matter experts in the development and maintenance of T&E training standards and curriculum.
- k) Support project and configuration management subject-matter experts in the development and maintenance of standard processes associated with V&V.
- l) Guide and support the transition of ATO programs into the V&V policies and processes.
- m) Integrate V&V policies and processes into other FAA policies and processes (i.e., Acquisition Management System).
- n) Update and maintain the Verification and Validation Operations Guide, Test and Evaluation Handbook, and V&V policies.
- o) Support process improvement registrations and assessments (International Organization for Standardization and Capability Maturity Model® Integration).
- p) Update and document the TSB's Strategic Business Plan at least once a year.
- q) Develop strategies that ensure T&E processes are updated on a timely basis as needed to meet the requirements of new technologies.
- r) Conduct annual V&V summits that include the TSB members and T&E representatives from the FAA, other government organizations, and industry.
- s) Communicate and promote the use of Verification and Validation Protocol of Operations standards and practices within the FAA.
- t) Collect, analyze, and report test program performance metrics based on the measurements defined in the V&V Operations Guide.
- u) Develop partnerships with other governmental and industrial entities for the purpose of promulgating technology transfer relevant to the V&V processes areas.

5 TSB MEMBERS

A list of active TSB members is provided in Appendix C of this Charter and will be maintained independent from the Charter.

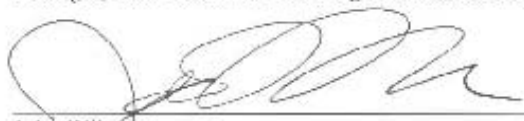
6 EFFECTIVE DATE AND APPROVAL OF CHARTER

This charter is effective as approved on the 8th day of June 2007.



Rodney Frushard
Manager, Test Standards and Program Assessment Team

6/6/07
Date



John Wiley
Manager, Technical Strategies and Integration Group

6/6/07
Date



Wilson N. Felder
Director, William J. Hughes Technical Center

6/8/07
Date

APPENDIX A

TSB CHARTER V&V TERMS AND DEFINITIONS

Integrated Test Team (ITT) - The ITT develops primary test program plans, including scope and costing, for Joint Resources Council consideration and approval.

An ITT is formed for each program and is composed of the developmental and operational test directors, system engineering representatives, program manager, program stakeholders, and TSB representatives. The ITT operations are contained in the V&V Test and Evaluation Operations Guide.

Test and Evaluation - (Acquisition Management System Work Breakdown Structure, 3.5) All activities associated with testing, analyzing, and evaluating in order to verify and validate that products meet specifications, satisfy requirements and are operationally suitable and effective.

Validation - (Capability Maturity Model® Integration (CMMISM)) The purpose of Validation is to demonstrate that a product or product component fulfills its intended use when placed in its intended environment. Validation activities can be applied to all aspects of the product in any of its intended environments, such as operation, training, manufacturing, maintenance, and support services. The methods employed to accomplish validation can be applied to work products as well as to the product and product components. The work products (e.g., requirements, designs, and prototypes) should be selected based upon the best predictors of how well the product and product components satisfy user needs.

Verification - (Capability Maturity Model® Integration (CMMISM)) The purpose of Verification is to ensure that selected work products meet their specified requirements. Verification is inherently an incremental process because it occurs throughout the development of the product and work products, beginning with verification of the requirements, progressing through the verification of the evolving work products, and culminating in the verification of the completed product.

APPENDIX B

TSB INTERNAL OPERATIONS

The TSB Chair will convene regular meetings at least monthly, with additional special meetings as required. With cause (e.g., a lack of new business or urgent old business on the agenda, or an expected lack of a quorum), the TSB Chair may cancel a regularly scheduled meeting by notifying participants (members, support staff, and ad hoc members) via e-mail. When the TSB Chair will not be available to convene TSB meetings or carry out their duties, a TSB member will be designated as the Acting TSB Chair to fulfill the responsibilities of the TSB Chair.

Any member having an item for TSB adjudication is responsible for requesting that the item be placed on the agenda. Relevant information (the item description, a list of all stakeholders, and the requested meeting date) must be e-mailed to the Chair at least three business days in advance, or include a justification for immediate action. The Chair will schedule a meeting date for the requested agenda item. If the Chair determines that the item does not fall under the purview of the TSB, the Chair will notify the member via e-mail.

Agenda Preparation and Distribution

All input to the TSB meeting agenda must be forwarded by the TSB members to the TSB administrative support and TSB Chair at least five working days prior to the meeting. On behalf of the Chair, TSB administrative support staff will e-mail a copy of the agenda to the membership, and all identified stakeholders, at least two business days prior to the meeting.

Conduct of Meetings

The TSB Chair or Acting Chair leads the meetings. One or the other must therefore be present at every TSB meeting. Every issue or agenda item must have an advocate in attendance to present the proposal, discuss the resolution of any issue, and answer any questions. The Chair reserves the right to defer an item or issue if no advocate is present. Non-agenda items will be discussed at the discretion of the Chair.

Preparation and Dissemination of Minutes

The TSB administrative support staff will prepare and distribute minutes to members and stakeholders for their review and comment no later than five business days following each meeting. Meeting minutes, at a minimum, will include discussion descriptions, decisions, assigned action items, and a list of attendees. The TSB members and stakeholders are responsible for submitting additions or corrections to the Chair and TSB administrative support staff within five business days or they will stand until presented at the next regularly scheduled meeting.

Quorums and Decision Making

A quorum of TSB members must be in attendance in order to act upon any agenda item. TSB decisions require the presence of no fewer than half the total TSB core members,

plus one (including the Chair or Acting Chair). A board member in attendance will be identified to address associated changes or to perform identified action items as part of the TSB decision.

The Chair will poll the members present to assess the prevailing opinion and ensure that all aspects and objections have been considered; however, in the event of a voting tie, the Chair will make the final decision.

The membership shall adjudicate all items presented before the board by one of the following actions:

- a) Approve
- b) Approve with changes
- c) Disapprove
- d) Defer

Action Items

The Chair ensures that all action items are documented. The responsibility for each action item will be assigned to a specific member and will have an assigned due date. The assignee will be responsible for apprising the Chair and TSB members on the status of the action item.

The TSB will periodically review all action items to verify their status. An action item status report is provided to the TSB membership on a monthly basis.